

U.S. Patent Application Serial No. 09/988,499
Amendment dated December 30, 2003
Reply to OA of September 30, 2003

REMARKS

Claims 1-29 are pending, of which claims 1-6, 11, 12, 14, and 26 have been amended. Claim 29 has been newly added. It is respectfully believed that no new matter has been added.

In the Office Action of September 30, 2003, the Examiner notes that "A reference to the prior application must be inserted as the first sentence of the specification of this application ... if applicant intends to rely on the filing date of the prior application under 35 USC 119(e) or 120."

The Applicant respectfully submits that, when the application was filed November 19, 2001, a reference to the prior application was properly inserted in the specification at the correct location.

The Examiner has objected to the drawings as failing to comply with 37 CFR 1.84(p)(5) relating to reference sign 30. FIG. 2 has been amended to include reference sign 30. Thus, the objection to the drawings should be withdrawn.

The Examiner has objected to the disclosure due to an informality relating to the phrase "preventing contact".

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The disclosure states "first pellet feeder 30 and the second pellet feeder 32 construct a device for preventing contact" (p. 17, lines 7-9). As depicted in FIG. 2, first pellet feeder 30 has a vertically-oriented circular pipe, and second pellet feeder 32 has a vertically-oriented circular pipe. Second pellet feeder 32 is placed in first pellet feeder 30. Because first pellet feeder 30 has a larger size than second pellet feeder 32, a region "A" is formed. The region "A" is a gap between the first pellet feeder 30 and the second pellet feeder 32. At the region "A", first pellet feeder 30 is prevented from contacting second pellet feeder 32 due to the difference in sizes of feeders 30 and 32. As depicted in FIG. 2, a side region of first pellet feeder 30 is prevented from contacting a side region of second pellet feeder 32, and this is shown by the gap corresponding to region "A".

Thus, the objection to the disclosure should be withdrawn.

Claims 1-10 and 26 stand rejected under the second paragraph of 35 USC 112 for various noted informalities. In response, claims 1-6 and 26 have been amended to remove the noted informalities. Thus, Applicant respectfully submits that the rejection of claims 1-10 and 26 should be withdrawn.

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Before turning to the cited art, a brief review of the present invention is in order. In the present invention, pellet storage tank 12 is a storage tank where resin pellets such as nylon are stored. Pellets are fed to a pellet storage 22 through an auto loader 16. A vacuum interception valve is arranged at each of a passage between the storage tank 12 and the auto loader 16 and a passage between the air-exhaust ventilator 14 and the auto loader 16. When the pellets are moved to the auto loader 16, the vacuum interception valves 18 are shut. Also, the means to feed gas is a mouth 64 arranged at another end opposing the injection hole of the cylinder of the injection molding apparatus. As shown in FIG. 1, mouth 64 is spaced apart from pellet feeding passage 40.

Claims 1-28 stand rejected under 35 USC 103(a) as being unpatentable over US Pat. 6,187,229 (**Takayama**) in view of US Pat. 4,632,564 (**Kopernicky**).

Applicant respectfully traverses this rejection.

Takayama describes an injection molding process and an injection molding apparatus. FIG. 1 depicts heating cylinder 1, injection screw 2, retaining cylinder 3, and feed port 4.

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Kopernicky describes an apparatus for removing moisture and volatiles from molding particulate plastic material feed. FIG. 1 depicts screw 10, barrel 12, motor 13, opening 14, and heating bands 16.

With respect to claims 1, 3, 4, and 29, and all claims depending therefrom, **Takayama** and **Kopernicky** do not teach or suggest, alone or in combination, the features therein of "the resin pellet feeding passage feeding the pellets into the injection molding apparatus at a location spaced apart from where the mouth feeds the at least air into the injection molding apparatus" in combination with the other claimed features.

With respect to claims 11, 12, and 14, and all claims depending therefrom, **Takayama** and **Kopernicky** do not teach or suggest, alone or in combination, the features therein of "a device for automatically feeding pellets with a vacuum interception valve, the device and the valve being disposed to intercept a passage between a pellet storage tank and other pellet storage" in combination with the other claimed features.

With respect to claim 2, and all claims depending therefrom, **Takayama** and **Kopernicky** do not teach or suggest, alone or in combination, the features therein of "a decompressor connected to the exhaust gas passage for exhausting the moisture and the exhaust gas from the pellet feeding passage side to the outside of the injection molding

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apparatus, and moisture and exhaust gas which are generated in a die" in combination with the other claimed features.

With respect to claims 5, 6, 13, and 15, and all claims depending therefrom, **Takayama** and **Kopernicky** do not teach or suggest, alone or in combination, the features therein of "a detector for detecting an accumulation amount of the resin pellets situated inside a cylinder of the injection molding apparatus" in combination with the other claimed features.

With respect to claims 22-25, and all claims depending therefrom, **Takayama** and **Kopernicky** do not teach or suggest, alone or in combination, the features therein of "exhausting, out of the cylinder, exhaust gas and moisture generated when the resin pellets melt in the cylinder as well as air fed from an opposite side to an nozzle of a front end of the cylinder from a pellet feeding side of a pellet feeding zone of the cylinder through a pellet exhaust gas passage by reducing pressure" in combination with the other claimed features.

Thus, this rejection should be withdrawn.

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Accordingly, all pending claims, as amended, are in condition for allowance, which action, at an early date, is requested.

If the Examiner feels that this application is not currently in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney at the telephone number indicated below to arrange for a telephone conference to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,
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PATENT TRADEMARK OFFICE

Enclosures: Replacement Sheet
Annotated Sheet Showing Changes

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